



UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

Mail Stop 6010

January 10, 2008

Mr. Timothy J. Stultz  
Chief Executive Officer  
Nanometrics Incorporated  
1550 Buckeye Drive  
Milpitas, California 95035

**RE: Nanometrics Incorporated**  
**Form 10-K for the fiscal year ended December 30, 2006**  
**Filed March 15, 2007**  
**File No. 0-13470**

Dear Mr. Stultz:

We have reviewed your response dated December 7, 2007 and have the following comments. We have limited our review to matters related to the issues raised in our comments and we will make no further review of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Form 10-Q for the period ended September 29, 2007

Note 1. Consolidated Financial Statements – Reclassification, page 6

1. Please refer to prior comment 3. We note that beginning in the fiscal quarter ended March 31, 2007, you changed your presentation of deferred product revenues by “netting” the associated product costs with the gross deferred revenue and designating the “net” amount as deferred profit margin. Please tell us how

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you concluded netting of gross revenue and gross cost of sales complies with the guidance in FIN 39, *Offsetting of Amounts Related to Certain Contracts*.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Dennis Hult, Staff Accountant, at (202) 551-3618 or me at (202) 551-3554 if you have questions regarding these comments. In this regard, do not hesitate to contact Martin F. James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Angela J. Crane  
Accounting Branch Chief